

CLIMATE SILENCE, MORAL DISENGAGEMENT, AND SELF-EFFICACY:
HOW ALBERT BANDURA'S THEORIES INFORM OUR CLIMATE-CHANGE
PREDICAMENT

by
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“Though more work always remains, the physical sciences have accomplished their core task when it comes to climate change. We know what we need to know about the causes and consequences of our actions. What we don’t know is how to stop ourselves, which is why ... the social sciences are so important from here on out.”

Bill McKibben (blurb on back cover of R. E. Dunlap & R. J. Brulle (Eds.) (2015). Climate change and society: sociological perspectives. Oxford: Oxford University Press.)

Abstract

Although Americans are becoming increasingly concerned about climate change, only one in five Americans hear people they know talk about the issue at least once a month. This has been described as a “spiral of silence,” because when people don’t hear others talk about climate change, they tend not to talk or think about it themselves. This paper examines climate silence in the United States, arguing that climate silence can be more subtle than simply not talking about climate change, such as where people talk about certain aspects of climate change, but avoid mentioning the more disturbing or negative implications of climate change.

The paper considers two major theories developed by Albert Bandura at Stanford University, self-efficacy and moral disengagement theory. In his recent book *Moral Disengagement* Bandura links climate change to U.S. overconsumption, “excessive consumerism,” “unbridled economic self-interest,” “free-market principles,” “free-market fundamentalists,” and our “market-driven culture.” These arguments align Bandura with scholars and writers who urge Americans to focus on capitalism, economic growth, neoliberalism, and overconsumption as both the causes of climate change, and major obstacles to addressing it.

The paper concludes that in challenging moral disengagement surrounding climate change, climate activists and climate communicators would be well advised to consider both of Bandura’s theories, and to consult a growing literature in sociology that has examined the role of neoliberalism as a root cause of our climate predicament.

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Reader's Note

In February 2017 I interviewed the renowned Stanford emeritus professor Albert Bandura at his home in Stanford, California, to discuss climate change. The final chapter of Bandura's recent book, Moral Disengagement: How Good People Can Do Harm and Feel Good About Themselves, is about climate change and other environmental harms. Bandura's earlier work on self-efficacy and collective efficacy is also highly relevant to our climate-change predicament. In this paper I report on our conversation and on the relevance of Bandura's theories to our nation's efforts to address climate change.

Introduction

Americans are becoming increasingly concerned about climate change (Leiserowitz, Maibach, Roser-Renouf, Rosenthal, & Cutler, 2017). Yet many Americans rarely talk about it or hear others talk (or write) about it, whether in the media or in everyday conversations. Maibach and colleagues call this a “climate spiral of silence,” where “even people who care about the issue, shy away from discussing it because they so infrequently hear other people talking about it—reinforcing the spiral” (Maibach, Leiserowitz, Rosenthal, Roser-Renouf, & Cutler, 2016). And even when Americans do talk about climate change, they often fail to discuss it in depth, or with complete candor.

Pope Francis's 2015 encyclical, *Laudato Si': On Care for Our Common Home*, with its urgent moral arguments for addressing climate change, helped raise awareness of the issue in the U.S., and appears to have led to a small increase in the number of Americans who saw climate change as a moral issue (Maibach et al.,

2015). But even with that increase most Americans failed to see climate change as a moral issue, and the most recent polling shows that 2015's small increase in moral awareness was temporary. Moral concern about climate change has receded in the year following the pope's U.S. visit (Leiserowitz et al., 2017).

There was no discussion of climate change in the 2012 presidential debates between President Obama and Mitt Romney and very little in the 2016 debates between Donald Trump and Hillary Clinton, including no climate questions from moderators. David Orr has said "[h]ow we think about climate destabilization has a great deal to do with how we talk about it" (Orr, 2012)(xiv). A corollary to that might be "whether and how we talk about climate change has a great deal to do with how much and how deeply we think about it." And if we aren't thinking much or very deeply about climate change and all its ramifications, we are unlikely to fully understand the problem or address it wisely or with an appropriate degree of urgency.

This paper explores climate silence in America, focusing on two theories of the psychologist Albert Bandura, an emeritus professor at Stanford University. Each theory is the subject (and title) of a major book by Bandura, preceded by years' worth of research and journal articles (Bandura, 1997, 2016). Both theories were also discussed in Bandura's 1986 book on social cognition theory (Bandura, 1986).

Bandura's theory of *self-efficacy* (and *collective efficacy*) is key in understanding how to motivate individuals and groups of people to act on any major societal problem, including climate change. In a nutshell, the theory holds that individuals and groups are unlikely to attempt to act to solve a problem unless they

have a belief—a *perceived* sense of efficacy—that their individual and collective actions can make a difference, will help to solve the problem. The theory has particular relevance to climate change, because it is such a daunting problem. It is easy to become discouraged about climate change and feel that the problem is too great and that one person's—or even one nation's—action won't make a significant difference. Those attempting to persuade people (and corporations, cities, states, and nations) to take action on climate change therefore must be mindful of self-efficacy theory and communicate about climate change in ways that do not reduce their audience's sense of self-efficacy and collective efficacy.

Bandura's theory of *moral disengagement* also has great relevance to climate change, although this theory has thus far received less attention from climate activists and communicators. The theory is perfectly summed up in his *Moral Disengagement* book's subtitle—*How Good People Can Do Harm and Feel Good About Themselves*. Moral-disengagement theory posits that people generally engage in self-regulatory behavior to avoid doing harm to others and to live up to their moral standards. But as Bandura has shown, people can and do use a variety of mechanisms to turn off—disengage—their moral standards. This allows them to do harm—sometimes great harm—while still believing they are living up to their moral standards.

Bandura ends his *Moral Disengagement* book with a chapter about the environment and climate change. He makes clear his concern, calling climate change “the most urgent problem of the century,” and adding “the remarkable thing about the global warming problem is the low sense of urgency to abate it” (Bandura,

2016)(398). In the epilogue Bandura notes that while we have made some progress in “switching from fossil fuels to clean energy” we have failed to curb “wasteful, excessive consumption,” and indeed that problem is “worsening” (Bandura, 2016) (445).

This paper argues that giving full consideration and proper balance to each of Bandura’s two theories discussed here—self-efficacy and moral disengagement—can help to improve the effectiveness of climate-change communication. That proper balance would have more emphasis on moral arguments and moral disengagement, a topic that today is largely absent from climate-communication efforts (with *Laudato Si’* being a notable exception). Increased awareness of moral disengagement might in turn lead to an altered and improved understanding of self-efficacy and collective efficacy as they apply to climate change.

I also argue that climate communicators, climate activists, and environmental groups, in battling moral disengagement and making the case that climate change is indeed a profound moral issue we cannot ignore, would do well to consult a rich and growing body of sociological research pertaining to environmental issues and climate change. That research sheds light on the scale and scope of climate change’s societal causes and effects and how to address them.

Discussion

Albert Bandura

Albert Bandura is a towering figure in the field of psychology. His life story is itself an example of self-efficacy and moral *engagement*. Born in 1926, he grew up in rural Alberta, the son of Eastern European immigrants who had no formal education

(Foster, 2006). After getting an undergraduate degree in psychology at the University of British Columbia, Bandura came to the United States for graduate school at the University of Iowa. After getting his Ph.D. there, he arrived at Stanford in 1953 with a one-year appointment as an acting instructor, and never left (Zimmerman & Schunk, 2003). Today he is the David Starr Jordan Professor, Emeritus, in the School of Humanities and Sciences.

Bandura published his most recent book, *Moral Disengagement*, in 2016, shortly after his 90th birthday. Last year he also received the National Medal of Science, the nation's highest scientific honor, which is rarely awarded to social scientists (Clay, 2016). In a statement shortly after President Obama announced the medal award, Stanford's president, John Hennessy, said that Bandura's "lifetime of work in learning how we can understand and change behavior has been instrumental in helping people around the world lead healthier, more productive and more peaceful lives" (Lovell, 2015).

Self-Efficacy

Bandura's 1997 book *Self-Efficacy: The Exercise of Control*, does not mention climate change, but reading it twenty years after publication, one can easily discern self-efficacy theory's applicability to the climate crisis. Bandura's key insight with self-efficacy theory is that "[p]eople will approach, explore, and try to manage situations within their perceived capabilities, but unless they are externally coerced, they avoid transactions with those aspects of their environment that they perceive exceed their coping abilities." A key word in that sentence is "perceived." It is not just people's abilities that affect their performance in life, but also their *perception* of

their abilities—their belief that addressing an issue is within their individual and collective capabilities.

“People’s beliefs in their efficacy affect almost everything they do: how they think, motivate themselves, feel, and behave” (Bandura, 1997)(14, 19). And just as an individual must have perceived self-efficacy to take action to address a problem, the same is true with individuals working in groups, in a process Bandura calls “collective efficacy.” Collective efficacy is closely related but not identical to self-efficacy. As Bandura puts it, “[a] collection of inveterate self-doubters is not easily forged into a collectively efficacious force,” but “a collection of supremely efficacious individuals may perform poorly as a unit if they do not work well together” (Bandura, 1997)(480). Moreover, “individuals with high levels of collective efficacy living in communities where others also generally have high levels of collective efficacy” are likely to accomplish more than similar efficacious individuals living in communities where others have lower levels of collective efficacy (Thaker, Maibach, Leiserowitz, Zhao, & Howe, 2016)(30).

In *Self-Efficacy*’s last sentence Bandura says: “The times call for social initiatives that build people’s sense of collective efficacy to influence the conditions that shape their lives and those of future generations” (Bandura, 1997)(525). That 20-year-old call to action to build people’s perceived collective efficacy is all the more pertinent today as we face the growing climate crisis.

Environmental groups and others are attempting to build a climate movement big enough and powerful enough to push the United States and the world to take effective action to sharply reduce climate-disrupting greenhouse-gas

emissions. Progress has been slow at best, and under any circumstances making the necessary global energy transition would be daunting. On top of that there is a powerful climate change countermovement, funded by conservative think tanks and fossil fuel interests, that disseminates climate-science disinformation and works to block or delay the transition from fossil fuels to clean energy (Brulle, 2014; Dunlap & Jacques, 2013; Dunlap & McCright, 2015; Farrell, 2016a, 2016b; M. E. Mann & Toles, 2016; Oreskes & Conway, 2011). The times do indeed call for building people's individual and collective sense of efficacy "to influence the conditions that shape their lives and those of future generations."

Moral Disengagement

Perhaps in part because Bandura's work on moral disengagement was published more recently, it is less widely known than his self-efficacy theory, both as a general concept and in relation to climate change.¹ Bandura told me, however, that he expects that to change. His research on self-efficacy, culminating in his book of that name, led to an explosion of research by others, with whole books devoted to the issues raised in each of the chapters in the book *Self-Efficacy* (Bandura, 2017). Bandura expects something similar will happen in coming years with moral-disengagement theory, because, he told me, in his *Moral Disengagement* book "there virtually is no social system that is not being indicted. And so I expect that it's going

¹ A Google Scholar search for the term "moral disengagement" yielded 9,840 results on February 22, 2017. A search for "self-efficacy" yielded 1.57 million results. With the term "climate change" added to these two searches, "moral disengagement and climate change" yielded 392 results, while "self-efficacy and climate change yielded 12,200."

to be creating the same kind of widespread application as *Self-Efficacy* did” (Bandura, 2017).

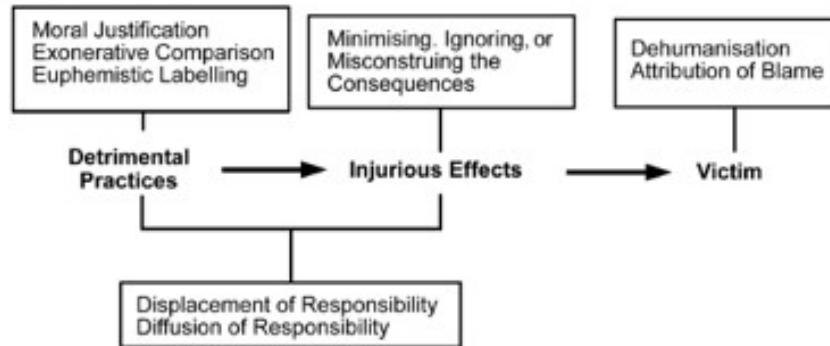
The key to understanding moral disengagement, how it works, and why it is important, is to know that “affective *self*-sanctions are the major mechanism by which people come to live in accordance with their moral standards” (Bandura, 2016)(27)(emphasis added). But, Bandura explains, “[m]any psychosocial maneuvers can be used to disengage moral self-sanctions from inhumane conduct. Selective activation and disengagement of self-sanctions permits different types of conduct by persons with the same moral standards.” Thus, “[m]oral disengagement does not alter moral standards. Rather, it provides the means for those who morally disengage to circumvent moral standards in ways that strip morality from harmful behavior and their responsibility for it” (Bandura, 2016)(2, 3).

Moral disengagement has obvious applicability to explaining how people can participate in (or be silent bystanders to) great crimes and atrocities, such as the Holocaust and other genocides, while still being kind and considerate to others in their daily lives. But Bandura notes that the concept is not limited to such extreme circumstances: “In point of fact, [moral disengagement] is common in all types of moral predicaments managed by ordinary people in all walks of everyday life.” Indeed, “by late adolescence, children have learned the full array of disengagement practices” (Bandura, 2016)(1, 34).

Bandura identifies eight mechanisms that people (or organizations) use to disengage their conduct from their moral standards (Bandura, 2016)(49-91). Each of the eight is applied at one of four places (the behavior locus, the agency locus, the

outcome locus, and the victim locus) along the line between harmful behavior or conduct (detrimental practices) and the harmful effects that conduct has on people (victims), as shown in the figure below:

Figure 1 Psychosocial mechanisms through which moral self-sanctions are selectively disengaged from detrimental practices at different points in the exercise of moral agency



Source: Bandura (1986)

All eight of these disengagement mechanisms are frequently used to slow or block humanity’s response to climate change. I list Bandura’s eight categories here, with an example or two of each mechanism at work with regard to climate change. In many instances, people or organizations combine two or more of these mechanisms in their efforts to justify continued fossil-fuel use or to oppose action to reduce greenhouse-gas emissions.

(1) Moral, Social and Economic Justifications

In this mechanism of moral disengagement, people convince themselves that their harmful conduct is in fact moral, socially good, and economically beneficial. Bandura calls this “sanctifying” a particular practice, “a generic term for diverse ways of justifying the rightness of harmful practices” (Bandura, 2016)(49). It is

quite easy to see this technique at work regarding climate change, where the primary culprit is carbon-dioxide emissions from burning fossil fuels. People and organizations hoping to delay or block action to reduce carbon emissions simply talk up the undeniable benefits of fossil-fuel energy use, while ignoring, minimizing, or denying altogether the harmful consequences of the resulting emissions. They do this while also ignoring that non-emitting alternatives are available, or overstating the costs or understating the feasibility of those alternative clean-energy sources.

Some have gone so far as to say that the moral good of burning fuels outweighs the harm caused by the resulting carbon emissions. Bjorn Lomborg, who has received substantial funding from climate countermovement sources, has argued that global warming will be good and that fossil fuels are needed for the world's poorest people (Caney, 2010; Lomborg, 2007; Readfearn, 2014, 2015). Similarly, Calvin Beisner of the Cornwall Alliance has argued, in critiquing Pope Francis's *Laudato Si'*, that increased carbon dioxide is good for the world and people, and that reducing fossil fuel use will trap poor people in poverty (Beisner, 2015). The Cornwall Alliance is linked to fossil-fuel interests and conservative groups (Romm, 2010b).

(2) Euphemistic Language

Euphemisms are often put to work to downplay the harm that carbon-dioxide and other greenhouse-gas emissions cause to the climate, or to hide the true purpose of groups opposed to climate action. The expression "clean coal" is a commonly used euphemism, used to divert attention from the fact that coal is the most carbon-intensive fossil fuel. For example, coal-burning utilities tout how much

their harmful “emissions” have been reduced at a power plant by pollution control devices such as mercury scrubbers, while simply ignoring the fact that these devices do nothing to reduce the plant’s carbon-dioxide emissions. Or they build coal power plants that are “carbon-capture ready,” ignoring the fact that the plant will be burning coal for many years or decades before carbon-capture techniques will be installed, if indeed they ever are (Hamilton, 2013).

Many fossil-fuel industry front groups have euphemistic names, belying their mission to block climate action and promote carbon emissions. Examples include the American Coalition for Clean Coal Electricity, and an organization called Friends of Science that disseminates climate-science disinformation (Milnes & Haney, 2017; Plait, 2014). The anodyne- and vaguely academic-sounding Center for the Study of Carbon Dioxide and Global Change similarly disseminates science disinformation, and is funded by, among others, a foundation affiliated with the Koch brothers, major shareholders in Koch Industries, a large fossil-fuel company. Bandura identifies the use of industry front groups as a specific example of a moral-disengagement technique employed to enable environmental harms (Bandura, 2007, 2016) (21)(13).

(3) Advantageous Comparison

“Self-exoneration by advantageous comparison with more flagrant inhumanities is a ... mechanism for cloaking [harmful] behavior in an aura of benevolence”(Bandura, 2016). Any parent of young children is familiar with the technique (although, one hopes, in connection with lesser evils than

“inhumanities”). The point of course is that people often excuse their own harmful conduct by pointing to others whose conduct is (really, or supposedly) worse. This can be seen in the climate context with individual behavior, corporate behavior, and even the conduct of nations. At the individual level, one can attempt to justify one’s carbon footprint attributable to wasteful consumption or excessive driving or flying by pointing to others who consume more, drive bigger cars, or fly more often. At the corporate level, an electric utility can attempt to justify its building new natural gas-fired power plants (while working to delay wind and solar power) by pointing to other utilities that burn more coal, or that have higher rates of carbon intensity in their power production.

Bandura sees advantageous comparison at work in how some in the United States attempted to justify the nation’s failure to ratify the Kyoto Protocol in the 1990s. Those in the U.S. opposed to ratification justified their recalcitrance by pointing to how the agreement would place stricter requirements on the U.S. than on China and India. Those two countries and others in the Global South, in turn, pointed out that the U.S. and other Western nations were responsible for most of the carbon dioxide in the atmosphere. “And so both sides felt self-righteous. They used comparative justification and both felt self-righteous” (Bandura, 2017) (Bandura, 2016)(397).

(4) Displacement of Responsibility

With this moral-disengagement mechanism, those doing harm obscure or minimize their “agentive role in causing harm” (Bandura, 2016)(58). With climate change, this is easily seen in the way that fossil-fuel companies use front groups to

do much of their dirty work in fighting efforts to reduce carbon emissions. We saw examples of this at work in the above discussion of euphemistic language. The euphemisms are used to conceal the true purposes of the groups' anti-climate work. But using front groups in the first instance is done to provide those who fund them with some distance—"displacement of responsibility"—from the work being done. A term from the Watergate era aptly describes the concept—maintaining "plausible deniability." Thus, for example, a business can claim to be a good corporate citizen and environmental steward, while still supporting the American Legislative Exchange Council (ALEC), which works behind the scenes to promote climate-science disinformation to state legislators (Heald, 2014, 2016b).

Some individuals and corporations have used intermediary organizations known as "donor directed funds" such as Donors Trust to conceal their funding of climate denial front groups. This provides yet another layer of displacement on top of euphemistic names and the use of the front groups themselves. The sociologist Robert Brulle published a detailed analysis of how this disengagement mechanism has funneled hundreds of millions of dollars from unknown sources to organizations that promote climate-science denial (Brulle, 2014).

(5) Diffusion of Responsibility

Closely related to displacement of responsibility is diffusion of responsibility. "Any harm done by a group can always be attributed largely to the behavior of others" (Bandura, 2016)(62). That is perhaps nowhere more true than in the case of climate change, which is the result primarily of more than a century of

industrialization in the Western nations, a system most of us in the U.S. were born into, through no fault of our own. One can thus absolve oneself, if one is so inclined, of individual blame for our current climate predicament. On the other hand, President Lyndon Johnson was briefed on the problem of anthropogenic global warming over 50 years ago, and for at least 25 years we've known we need to decarbonize our economy, but have done far too little to achieve that.

(6) Disregard, Distortion, and Denial of Harmful Effects

This is perhaps the best known, and also most effective moral-disengagement mechanism that has been used to prolong and exonerate our nation's inaction in addressing climate change. Climate-science denial is the epitome of moral disengagement. The role of conservative think tanks and the fossil-fuel industry in funding and promoting climate-science denial has been documented in considerable detail (Brulle, 2014; Dunlap & Jacques, 2013; Dunlap & McCright, 2015; Farrell, 2016a, 2016b; Oreskes & Conway, 2011). Former ExxonMobil CEO Rex Tillerson, now the U.S. Secretary of State, demonstrated moral disengagement when he downplayed climate change harms by saying that the risks are "overblown" and we can simply adapt to the changing climate (Associated Press, 2012; Mooney, 2016).

In time, corporate- and conservative think tank-funded climate-science denial, and our society's tolerance of it, will come to be seen as one of the greatest moral failures in American history. This denial campaign has caused and will cause incalculable suffering around the world. As the climate scientist Michael Mann has noted, "history should not be allowed to forget" who the climate-science deniers are

and what they have done, but “history will be too late” (M. E. Mann & Toles, 2016)(115).

(7) Dehumanization

Bandura’s last two disengagement mechanisms focus on the victims of harmful conduct. Eventually, of course, climate change will harm all of humanity. We and our descendants all are or will be victims. But the first to suffer, and those least equipped to adapt to or survive the disruptions of climate change, are chiefly poor and vulnerable people, most of whom live far away, largely in the Global South. Because of their low-consumption, low-emission lifestyles, they also happen to be the people least responsible for the climate crisis. As an example of the dehumanization moral-disengagement mechanism, Bandura cites what he calls a “self-centered” opinion column by the prominent climate-science denier Myron Ebell (Bandura, 2016)(414). Ebell touted supposed benefits of climate change in northern climes and ignored the effects on what Bandura calls “vulnerable others” (Ebell, 2006) (Bandura, 2016)(414). Naomi Klein has explicitly linked such “othering” views about the Global South (a concept devised by Edward Said) to both the causes of climate change and the world’s failure to respond appropriately to mitigate it (Klein, 2016; Said, 1979).

Under the best of circumstances (that is, even without corporate-funded climate-science denial) it is difficult for many Americans to imagine how climate change is and will be affecting poor people on the other side of the world, whose lives are very different from ours. But Bandura notes that that is what we must do to counter moral disengagement. We must see such people as fellow human beings

("seeing common humanity in others") who are and will be suffering, in large part because of our high-consumption, high-emission Western lifestyles. "One of the most striking findings of research on the suspension of morality is the extraordinary power of humanization to curb inhumane practices" (Bandura, 2016)(446).

(8) Attribution of Blame

Bandura's eighth disengagement mechanism involves shifting the blame from perpetrator to victim, as a way to allow one to continue harmful conduct while exonerating oneself from responsibility for that conduct. We saw this at work in the discussion above about those in the U.S. government who opposed the Kyoto Protocol because it imposed stronger greenhouse-gas reductions on developed nations than on developing nations, and blamed developing nations for this. Many in the U.S. simply refused to acknowledge their nation's historical role in causing the climate crisis, while looking to others to shoulder the major burden of addressing it. A recent study interviewing men in Calgary, where the economy is highly dependent on oil extraction from the Alberta tar sands, found that men (but not women) tended to both deny that climate change is human-caused, while also pointing to China and India as places where (they contend) it makes more sense to work to reduce carbon emissions (Milnes & Haney, 2017). The men held fast to their climate-contrarian views despite Calgary having recently experienced devastating flooding likely attributable to climate change. The disparity found between men and women aligns with Bandura's observation that by adolescence boys are generally more adept at moral disengagement than girls (Bandura, 2016)(34).

Climate Silence

Before turning to how self-efficacy and moral disengagement may be related to America's climate silence, I discuss what I mean by "silence." As noted above, Maibach and colleagues have demonstrated that few Americans hear about global warming regularly in the media or in everyday conversation, and 68 percent of Americans rarely or never discuss the issue with family or friends (Maibach et al., 2016). This becomes a spiral of silence as people, not hearing much about climate change, pick up a societal signal that talk about climate change is not normal or desirable. Although not referring specifically to climate change, the sociologist Eviatar Zerubavel, in his slim book *The Elephant in the Room: Silence and Denial in Everyday Life*, refers to such a spiral of silence as a "conspiracy of silence, whereby a group of people tacitly agree to outwardly ignore something of which they are all personally aware..." (Zerubavel, 2007)(2).

The "socially constructed silence" surrounding climate change hinders action on mitigation and adaptation, because "interpersonal communication about topics is crucial to build support for social change..." (Geiger & Swim, 2016). Zerubavel explains that "[b]y enabling ... collective denial, conspiracies of silence prevent us from confronting, and consequently solving, our problems" (Zerubavel, 2007)(87). He considers silence on an issue to be a form of communication that "often speaks louder than words" and that involves "a deliberate effort to refrain from noticing..." (Zerubavel, 2007)(8-9).

Although Zerubavel never mentions climate change in his book, he makes a point that seems particularly apt in the case of some types of climate silence: “[Silence] usually involves refusing to acknowledge the presence of things that actually beg for attention, thereby reminding us that conspiracies of silence revolve not around those largely unnoticeable matters we simply overlook, but, on the contrary, around those highly conspicuous matters we deliberately try to avoid.” (Zerubavel, 2007)(9). No doubt much of the climate silence in America does involve people who truly don’t think about climate change and truly overlook it, or don’t notice it. Certainly corporate-funded climate-science denial has greatly increased the number of such people.

But another form of silence involves people and organizations who do think and talk about climate change a good deal, but fail to include certain aspects and implications of the problem in their discussions. And the aspects and implications that often are excluded from the conversation tend to be the more disturbing and problematic implications of our climate predicament. The late sociologist Stanley Cohen, in his classic study of denial and silence, *States of Denial: Knowing about Atrocities and Suffering*, called this sort of partial silence “implicatory denial,” where “information is selected to fit existing perceptual frames and information which is too threatening is shut out altogether” (Cohen, 2001)(5-9). The sociologist Kari Norgaard found Cohen’s implicatory denial to be present in many discussions of climate change. The presence of such implicatory denial can manifest itself in climate silence, including silence about climate change’s moral aspects. “What is minimized [i.e., not discussed, or rarely discussed] is not information itself, ‘but the

psychological, political or moral implications that conventionally follow” (Norgaard, 2011)(10-11), quoting (Cohen, 2001)(8).

So in analyzing climate silence I use a broader definition of “silence” than the obvious instance of not talking about climate change at all. Climate silence can be more subtle than that, yet equally or perhaps more damaging. It can include environmentalists talking only about “clean energy,” or “jobs,” or “clean air,” while avoiding any mention of climate change. It can include talking about climate impacts such as extreme flooding and heat waves, but limiting the discussion to those impacts here in the U.S. Such limited discussion excludes mention of climate-change impacts on the world’s poorest people in the Global South, where it is likely that far more people are and will be suffering and dying from climate-change impacts. Partial climate silence can include talking about climate adaptation or resilience, while studiously avoiding mentioning the greenhouse-gas emissions that cause climate change, and how to reduce those emissions. It can also include talking about “adaptation” and “resilience” without mentioning what it is we are adapting *to* or working to be resilient *from*. The climate blogger Joe Romm has been calling out climate silence for years, and gives other examples (Romm, 2009, 2010a, 2011, 2016).

Once one becomes aware of the various manifestations of these broader forms of climate silence, and thinks to look (or listen) for them, they are quite easy to spot. You can find them almost anywhere. Thus, for example, I noted last year that in two utility executives’ speeches to business groups, where climate-change effects were very much part of the topic, the executives studiously avoided mentioning

climate change itself (Heald, 2016c). I found a similar dancing around the topic of climate change in a recent series of articles in the Newport News *Daily Press*, which addressed the effects of sea-level rise, but avoided linking those effects to global warming, or even mentioning global warming or climate change at all (Heald, 2017). A professor at Old Dominion University in Norfolk, Va. noticed this form of climate circumlocution in his threatened coastal city's planning document for the next century. The "Norfolk Vision 2100" plan discussed "learning to live with the water" and "resiliency," but failed to mention global warming or climate change and their role in causing the waters to rise (Allen, 2016).

Failure to see (and name and discuss) climate change as a moral or social-justice issue is itself a form of implicatory climate silence. The philosopher Dale Jamieson noted a decade ago that moral arguments rarely come up when climate change is discussed: "The language of morality is the language of care, empathy, responsibility, and duty. This language has largely been absent from discussions of climate change. Instead the language of science, economics, and technological development has been dominant" (Jamieson, 2007)(481). This is consistent with the recent finding that most Americans think of climate change as an environmental, scientific, and economic issue, while most fail to see it as a moral, poverty, social justice, or religious issue (Leiserowitz et al., 2017).

Even Bernie Sanders has been guilty of a subtle form of implicatory climate silence. He was widely (and correctly) acknowledged to be the strongest climate champion among the major U.S. presidential contenders. But as *Grist's* Ben Adler pointed out, both Sanders and Hillary Clinton avoided any discussion during the

campaign of U.S. efforts to help the poorer nations of the Global South deal with climate change. When Adler pressed both campaigns for comment on that silence, both failed to respond (i.e., more silence). Adler speculated why the two Democrats avoided the topic:

That may have something to do with the fact that—unlike raising the minimum wage or improving college affordability—this issue is a political loser. What’s the constituency for international climate justice in the U.S., especially among swing voters? How many disengaged young people can be dragged to the polls by the promise of paying for sea walls and solar panels in Bangladesh? A big climate finance proposal would be a ripe target for Republicans to attack, with little political upside. But our political conversation about climate change isn’t really serious unless climate finance is a part of it (Adler, 2016).

No doubt Adler’s speculation about the two campaigns’ reasons for avoiding the topic is correct. And he is surely (and sadly) correct that discussing climate justice for the world’s poor during the 2016 presidential campaign would have had “little political upside.” That was particularly true for Democratic candidates, inasmuch as the leading candidates in the Republican party were employing the moral-disengagement technique of climate-science denial, superimposed on most or all of the other seven moral-disengagement methods. But Adler is also correct that climate discussions that avoid worldwide climate justice are not fully and seriously addressing the problem of climate change.

I’ve noticed a similar form of climate silence among many U.S. environmental groups. In recent years these groups, to their credit, have increased their focus on environmental justice, noting that, *in the U.S.*, minority and low-income populations suffer a disproportionate share of environmental harms. The focus on environmental and climate justice increased significantly after Hurricane Katrina,

which demonstrated graphically how climate impacts can and will especially harm the most vulnerable Americans. But most big U.S. environmental groups still avoid discussing climate impacts on, or climate justice for, the world's poorest people in the Global South, just as Sanders and Clinton did in their campaigns. This is a form of silence, and also of moral disengagement.

Examples of this partial silence can be found in discussion of environmental justice on the websites of the National Resources Defense Council and Sierra Club ("Environmental Justice," n.d., "The Environmental Justice Movement," n.d.). A notable exception to this partial silence among U.S.-based environmental organizations is the relatively small Catholic Climate Covenant. Inspired by Catholic social teaching and in particular *Laudato Si'*, it frequently points out the adverse effects of climate change on the world's poorest people, and the moral imperative to address climate change (Catholic Climate Covenant, 2015; "Resources - Environmental Justice," n.d.).

Another, related form of climate silence is avoiding discussion of the need for Americans (and residents of other wealthy, developed nations) to make sacrifices in their high-consumption, consumerist lifestyles in order to address climate change (Dauvergne, 2016)(147). Few U.S. environmental groups and climate communicators ever mention that Americans need to make significant reductions in consumption in order to address climate change. Instead these groups use a more upbeat message, focused primarily on more clean energy, with talk of benefits such as jobs and clean air.

This discrepancy or tension between what climate activists say and what may actually need to be done to address the climate problem surfaced in the 2016 climate-change documentary film *Before The Flood*. In the movie Leonardo DiCaprio interviews the Indian environmental scholar and activist Sunita Narain, but cannot accept her argument (which she has been making for more than 25 years) that westerners will have to reduce their consumption in the face of climate change (Agarwal & Narain, 1991). Narain tells DiCaprio, “I’m sorry to say this to you, as an American, but your consumption is really going to put a hole in the planet. We need to put the issue of lifestyle and consumption at the centre of climate negotiations.” DiCaprio declines to engage Narain’s point substantively, instead saying he thinks Americans are unlikely to reduce consumption, and so the solution must consist of simply shifting to clean energy. Narain sadly shakes her head (York, 2016).

Another example of this form of climate silence can be found in the American reception of the novelist Amitav Ghosh’s 2016 deeply thoughtful climate-change book *The Great Derangement: Climate Change and the Unthinkable*. Ghosh is an acclaimed writer whose works of fiction have been widely reviewed and read in the U.S. Published in America by The University of Chicago Press, *The Great Derangement* has highly original arguments linking climate change’s causes back to colonialism and pointing out that much climate change discussion is Eurocentric and avoids the issue of reducing consumption in the West. Despite Ghosh’s renown, the book seems to have garnered little attention in the U.S., and was not reviewed in *The New York Times*, where a review would have brought it a much wider readership.

Bandura leaves no doubt that he considers U.S. overconsumption to be a big part of the climate-change problem, and that addressing it is a moral issue (Bandura, 2016)(376, 385). He notes three major areas that need to be addressed concerning climate change: (1) shifting energy production away from fossil fuels, (2) slowing population growth, and (3) “curbing wasteful, excessive consumption” (Bandura, 2016)(445). He sees “some progress” being made on the first two and told me he is optimistic about them. But he notes that efforts to address the third area, consumption, are “not only failing but ... worsening” (Bandura, 2016, 2017).

Of course Pope Francis is a notable exception to the general silence on moral issues surrounding climate change. Especially in his encyclical, *Laudato Si'*, but also in his speeches and travels, he has drawn attention to climate impacts on the world's poor, and connected climate change to overconsumption (“throwaway cultures”) in wealthier nations (Heald, 2016a). But in the U.S. the pope's climate message has generally not been fully embraced by the church leadership or congregations, and a majority of white U.S. Catholics voted for climate-science denier Donald Trump (Annett, 2016; Heald, 2016a).

A few U.S. environmental leaders have spoken out about our overconsumption and its climate impacts on the world's poor in the Global South. These include Bill McKibben, Naomi Klein (who is Canadian but active in the U.S.), David Orr, and James Gustave Speth (Klein, 2014, 2016; Orr, 2016; Speth, 2009, 2012). But the larger, better-funded environmental groups have done this far less, sticking safely to more upbeat messaging about clean energy.

There is likely another factor that facilitates moral disengagement by downplaying the most harmful climate impacts. That is the general inclination on the part of most people, and particularly Americans, to be positive about things, to assume that all will be okay, because that is how things usually work out for many in America today. Kari Norgaard has observed pressure to “keep things positive” in connection with climate change, the “perceived need to be hopeful. Not just perceived need but social norm” (Norgaard, 2011)(101).

Clive Hamilton has sharply criticized pressure to be optimistic about climate change, noting that a positive attitude can easily slip over the line into wishful thinking, which he says has been implicated in “history’s great acts of unpreparedness” (Hamilton, 2013)(105-05). David Orr makes the same point about what he calls “undue optimism”:

So the typical response to being told the facts of climate destabilization is to dismiss them because they are too depressing, as if science must be commensurate with one’s preferred emotional state and perpetual fun were a Constitutional right. Heaven forbid that anything should ever be depressing even when it is. The possibility that we have brought on for ourselves and our descendants a long run of climate-change-driven catastrophes is as indigestible as a rock.

Accordingly those who persist about telling the truth about climate change are admonished to be more positive and talk only about the many opportunities in the green economy. The line between optimism and delusion is often fuzzy.

(Orr, 2016)(41)

Orr adds that Martin Luther King “didn’t soft-pedal the truth about lynchings, beatings and discrimination. If he had, the fierce urgency of now would have been a lot less fierce, urgent and memorable” (Orr, 2016)(42-43). Speth makes the same point: “one still hears with regularity that it is a mistake to stress these gloomy and

doomy realities if one wants to motivate people. ... But... [w]e need to be reminded of the nightmare ahead.... [W]e will never do the things that are needed unless we know the full extent of our predicament” (Speth, 2009)(233-34).

Analysis

Analyzing Bandura’s self-efficacy and moral-disengagement theories together, as they pertain to climate change, is instructive in understanding the reasons for climate silence as well as possible ways to reduce that silence and build a stronger climate movement. My argument has five elements:

(1) Environmental groups and climate communicators, understandably concerned about their audience’s sense of self-efficacy and collective efficacy with respect to climate change, tend to emphasize positive clean-energy solutions, focusing much less on (a) the serious harmful human impacts of climate change, and (b) the need for reducing consumption, not as an alternative to clean energy, but as a necessary supplement to it. And when they do focus on harmful human climate impacts, they do so far more on domestic U.S. impacts, rather than the more imminent and dangerous impacts on the world’s poorest people.

(2) Making strong moral arguments for climate action, and strong arguments against moral disengagement, necessarily requires both (1) considerable focus on harmful human climate impacts, particularly in the Global South, *and* (2) considerable focus on the need to reduce consumption in the U.S. *in addition to* making the necessary transition to clean energy.

(3) Climate silence, both complete silence and the partial, implicatory silence of the sort described above, is both a cause and symptom of moral disengagement, *and* a perceived lack of self-efficacy and collective efficacy concerning how to address climate change.

(4) Effective climate messaging, and building an effective climate movement, thus requires both building self-efficacy and collective efficacy, while also being candid about the *worldwide* moral implications of climate change, calling out moral disengagement and implicatory silence, and encouraging moral *engagement* on the issue.

(5) And finally, building self-efficacy and collective efficacy must be focused on the type of efficacy needed for the task at hand (which necessarily will include battles against moral disengagement), and efforts to rein in our consumerist, high-consumption, growth-focused culture. An essential part of this involves building a sense of efficacy to challenge what has come to be known as neoliberalism.

It is tempting to soft-pedal harmful climate-change impacts and implications in the interest of remaining hopeful and positive. The impacts and implications of climate change have always been disturbing, particularly if one thinks honestly and deeply about them. Our nation's and the world's failure to address the issue with the necessary honesty and urgency over the past 30 years is itself disturbing. One can easily understand why many Americans are silent about climate in whole or in part, and prefer to look the other way and carry on with ordinary daily life.

It is also tempting to downplay or deny the need for reduction in American consumption levels, because stressing that need is a tough sell to the American

people. It is made all the tougher (as with everything else about addressing climate change) by well-funded climate-science denial that suggests the problem is overblown or entirely imaginary. Related to the consumption issue is capitalism itself, particularly in its currently dominant neoliberal form. Market fundamentalism and near-worship of business and economic growth exert a strong influence on American culture and politics. The sociologists Riley Dunlap and Aaron McCright convincingly demonstrate that neoliberal ideology is a strong force behind the denialist countermovement that manufactures purported doubt and uncertainty about climate science (Dunlap & McCright, 2015).

As a result of neoliberalism's dominance, any discussion of the role that capitalism, economic growth, and neoliberalism play in the climate crisis is "nearly taboo." Only some of the most left-leaning environmental leaders and thinkers, Pope Francis, and some in academia, especially sociology, have addressed those connectons (Dunlap & Brulle, 2015; McCright & Dunlap, 2010)(430). The Indian scholar and activist Sunita Narain and her co-author Chandra Bhushan also note the taboo on discussing U.S. (and other nations') consumption, saying "The C-word is the C-word" (Narain & Bhushan, 2015)(vii).

Building self and collective efficacy for any difficult task is daunting. And climate change is likely the greatest collective challenge civilization has ever faced (Beck, 2016)(36) (Conover, n.d.) (Hamilton, 2013)(210-211, 215, 219) (Orr, 2016)(24, 42) (Ghosh, 2016)(12). For Americans in 2017 the task at hand has grown all the more daunting with a new president who has called climate change a Chinese hoax and has appointed a new Environmental Protection Agency

administrator, Scott Pruitt, who denies climate science and has filled top agency positions with likeminded colleagues (Davenport, 2017a, 2017b, 2017c; Wong, 2016).

It is tempting to cope with the enormous climate-change task at hand by scaling it down to match our perceived individual and collective efficacies. Kari Norgaard suggests that that has happened with some people (Norgaard, 2011)(68, 73). But Bandura warns that for self-efficacy and collective to succeed in addressing a problem, there has to be efficacy *for the proper task at hand*. (Bandura, 1997)(64, 66). Stated another way, it won't do to adjust the climate-change task at hand down to an individual's, or a society's, perceived sense of efficacy. What has to be done is to assess honestly and accurately the task at hand, and then build self and collective efficacy for that task.

There are certainly good reasons, as a matter of effective communications strategy, not to be negative all the time, or to dump too much negative information on an audience in one sitting. It is easy to become overwhelmed by the details and implications of climate change. So climate communicators should know their audience, and avoid overwhelming it. A new study suggests that moral arguments about climate change effects on the world's poorest people, such as those Pope Francis asserted in his speeches and in *Laudato Si'*, may be most effective on people who are already concerned about climate change (Myers, Roser-Renouf, Maibach, & Leiserowitz, 2017). This is important, because building a strong climate movement is not merely about persuading more people to become concerned about climate

change. It also requires persuading those who are already concerned to take action (or stronger action).

I asked Bandura about what I see as the tension between self-efficacy and moral disengagement when addressing climate change. On the one hand, self-efficacy theory emphasizes the importance of avoiding hopelessness and despair. On the other hand, the instances of moral disengagement surrounding climate change need to be challenged vigorously. Making those challenges necessarily requires complete honesty in disclosing *all* the climate-change harms that are happening now and coming later in the century and beyond. As the late sociologist Stanley Cohen said, in his classic study of denial and silence, *States of Denial: Knowing about Atrocities and Suffering*: “Despite the complex obstacles between information and action—the entire subject of my book—no humanitarian, educational or political organization should even consider limiting its flow of knowledge” (Cohen, 2001)(295).

In my discussion with Bandura, he acknowledged the enormity of the task at hand in addressing climate change. He agreed that it is essential to be candid about the scale and scope of the problem. But he said that self-efficacy and collective efficacy are still essential. To ensure adequate self and collective efficacy for a large task, the task has to be broken down into manageable subparts and all subparts must then be addressed (Bandura, 1997, 2017)(134-35, 219). But it is essential not to confuse the subtasks for the larger task itself.

In *Self-Efficacy*, Bandura notes that to address great social problems, proper efficacy requires people “willing to endure in pursuits strewn with obstacles and

uncertainties,” who will “persevere against tough odds.” Such people, he says, may encounter “social rejection,” which can “scare off the fainthearted.” Or they may be dismissed as “attention-seekers, or as self-deluded eccentrics doggedly pursuing ill-conceived ideas.” Bandura concludes: “To paraphrase the astute observation of George Bernard Shaw, since reasonable people adapt to the world and unreasonable ones try to alter it, human progress depends on the unreasonable ones” (Bandura, 1997)(71-72). All this well describes leaders of great social movements such as Gandhi, Martin Luther King, Jr., and American abolitionists in the 18th and 19th centuries. And it well describes those leaders who have made strong moral arguments in favor of climate action, and have directly challenged the role of consumption, capitalism, and neoliberalism in causing climate change and blocking effective action to address it. Such leaders include Bill McKibben, Naomi Klein, Tim DeChristopher, and Pope Francis. Many of the larger, more mainstream, well-funded U.S. environmental groups and their leaders have been less willing to challenge neoliberalism, and especially unwilling to challenge economic growth, consumption, or capitalism. That reflects the “taboo” described by Dunlap and Brulle and Narain and Bhushan, but also represents a clear-eyed assessment of what *seems* politically possible in America today. Limiting ourselves to what seems politically possible, in turn, brings to mind Bandura’s point (derived from George Bernard Shaw) that human progress depends on unreasonable people.

Bill McKibben is frequently called a radical. Certainly he and the 350.org group he founded are on the more left-leaning side of the diverse environmental groups in the U.S. He has defended himself from the “radical” charge with the

comment that those who deny climate science and propose to keep burning fossil fuels that change the atmosphere's chemical composition are the real radicals (McKibben, 2016). To my knowledge no one has accused Bandura of being a radical, environmental or otherwise. His books are written in a somewhat dry, academic style. Although he is of course well known and revered in his discipline, he has not been associated with the environmental or climate movements.

On my first reading of *Moral Disengagement* I didn't conclude that Bandura is an environmental radical. But when he told me, as noted above, "there virtually is no social system that is not being indicted" in the book, that caused me to think more deeply about the book, and re-read portions of it. In a dispassionate, scholarly way, Bandura's *Moral Disengagement* links climate change to U.S. overconsumption, "excessive consumerism," "unbridled economic self-interest," "free-market principles," "free-market fundamentalists," and our "market-driven culture," and stresses the need to make moral arguments against them (Bandura, 2016)(373, 376, 395, 396). Bandura doesn't use the word "neoliberalism," but it is clearly encompassed by his use of the quoted words. In both his book and in his discussion with me, Bandura condemned the way we in the U.S. use Gross Domestic Product (GDP) or Gross National Product (GNP) to measure our collective wealth and success, even referring in the interview to "the damn GNP," meaning "the way we evaluate society. ... And that's the amount of junk you produce" (Bandura, 2016, 2017).

Moral Disengagement's environmental and climate arguments align Bandura squarely with the scholars, thinkers, and other writers who have been urging

Americans to focus on capitalism, economic growth, free-market fundamentalism, neoliberalism, consumerism, and overconsumption as both the root causes of climate change, and also the chief obstacles to addressing it with appropriate urgency. These scholars and writers include Robert Brulle, Amitav Ghosh, Clive Hamilton, Naomi Klein, the UCLA sociologist Michael Mann (not to be confused with the Penn State climate scientist of the same name), Bill McKibben, Sunita Narain, Kari Norgaard, David Orr, James Gustave Speth, and Pope Francis (Brulle, 2010; Brulle & Antonio, 2015; Hamilton, 2010, 2013, Klein, 2011, 2014; M. Mann, 2013; Narain & Bhushan, 2015; Norgaard, 2011; Orr, 2012, 2016, Speth, 2009, 2012).

Yet challenging our overconsumption, economic growth, or capitalism itself seems beyond the pale for most of the larger U.S. environmental organizations today, not to mention for American politicians. Any politician doing so would surely be called radical. Near the end of *Merchants of Doubt*, a history of corporate-funded science denialism, Naomi Oreskes and Erik Conway explain how James Gustave Speth, who today is 75, came to be “radicalized” over the course of a long and distinguished environmental career:

Consider the case of Gus Speth, ... a member of President Jimmy Carter’s Council on Environmental Quality, and an advocate for action against acid rain. Speth is no rock-throwing radical. Born in South Carolina, he is the consummate southern gentleman: well-spoken, well educated, well regarded. As an undergraduate he attended Yale, went to Oxford as a Rhodes Scholar, and returned to Yale for law school. During his long career he taught at Yale and Georgetown, served as an advisor to President Carter, worked for the United Nations, and ... returned to Yale once again as the dean of the School of Forestry and Environmental Studies. *Time* magazine once called him the “ultimate insider.”

... Speth has become radicalized by the world’s failure to act on problems we have known about for a long time. He now concludes

that radical change is needed. “The global economy is crashing against the Earth,” he warns in ... *The Bridge at the End of the World*. ... His conclusion ... “is that ... we ... must seek transformative change in ... contemporary capitalism.

The merchants of doubt have produced just the effect they most dreaded. Southern gentlemen are now preparing to dismantle capitalism.

(Oreskes & Conway, 2011)

Bandura, of course, coming from Alberta and arriving at Stanford by way of Iowa, is not a *southern* gentleman. Nor is he preparing, at age 91, to dismantle capitalism himself. Nevertheless, *Moral Disengagement* is a quiet but firm voice supporting views of those like Speth who have called for transformative change in contemporary capitalism in order to address the climate crisis.

Recommendations

Most big U.S. environmental groups consult with climate communication experts on effective messaging. These experts are generally trained in psychology or communications. The focus on climate-communication training is often on how to communicate the science. That is certainly understandable, since the science is complex and the public’s knowledge of it and how science research in general works is limited. The remarkable success of corporate-funded climate-science denial has dramatically increased the need for honest, accurate, clear communication about climate science.

But climate messaging that sticks to communicating only, or even primarily, climate *science* is far too limited. Most Americans now recognize that climate change is real and is happening now (Leiserowitz et al., 2017). Bill McKibben noted (in the quote on the title page of this paper) that most of us know the general outlines of

what we need to know *from the physical sciences* “about the causes and consequences of our” climate-altering greenhouse-gas emissions. But, McKibben continued, “[w]hat we don’t know is how to stop ourselves, which is why ... the social sciences are so important from here on out.” A true understanding of our current climate change predicament will require interdisciplinary scholarship and effective communication of that scholarship. Climate change is often called an “all hands on deck” problem. There is a need for clear communication between and about the physical and social sciences, and the humanities as well.

Climate messaging in the coming years needs to expand beyond climate *science* and focus more on explaining how our social, political, and economic systems caused this crisis and how they are thwarting efforts to address it. In terms of Albert Bandura’s two theories discussed in this paper, that means ensuring that we honestly analyze the full ramifications of what we are up against, including the *worldwide* moral implications of our past and current failures to reduce emissions at an appropriate rate. That also includes honestly talking and thinking about, and then addressing, overconsumption in the U.S. and other developed nations—as Pope Francis, Speth, Orr, and a number of others, now including Bandura, have urged us to do. That means breaking the current spiral of silence, where so many Americans rarely talk about climate change or hear others discuss it. But it also means—perhaps more importantly—breaking the other form of partial, implicatory climate silence, where even those who do discuss climate change regularly often avoid frank discussion of its full effects and implications around the world.

The sociologist Kari Norgaard has examined climate silence in both Norway and the U.S. in her masterly book *Living in Denial: Climate Change, Emotions, and Everyday Life* (Norgaard, 2011). The “denial” in her title, refers not just (in fact not even primarily) to the outright climate-science denial found in the U.S. She acknowledges that that sort of denial is bad, but argues persuasively that “it is overshadowed by a more insidious problem, the larger number of people who express concern but fail to act” (Norgaard, 2011)(179). And that failure to act, in turn, is linked to silence. She notes that “[b]efore an issue can make it into a council meeting, onto picket signs, into the framing of a local news story, or into a newspaper editorial, somebody has to start talking about it” (Norgaard, 2011)(52). The historian Eric Foner explained recently that “[m]ore than any other movement ... abolitionism provided the template for how to achieve radical change in America. The abolitionists’ first task was to destroy the conspiracy of silence by which political parties, churches, and other institutions sought to exclude slavery from public debate” (Foner, 2017)(77). Similarly, the movement battling the AIDS epidemic had to struggle against a socially constructed silence surrounding the disease. The effort to break that silence and oppose discrimination and government inaction began with posters appearing all over New York City saying “Silence = Death” (Zerubavel, 2007)(87) (Sullivan, 2016).

Norgaard describes climate silence—both actual silence as well as partial, implicatory silences of the sort discussed above—as a collective, socially organized denial. Citing Cohen, Zerubavel, and other scholars, she notes that “social norms of attention, conversation, and emotion—that is the social standard of what is ‘normal’

to think and talk about and feel—are powerful, albeit largely invisible forces that shape what we actually *do* think and talk about and feel” (Norgaard, 2011)(132).

Norgaard further links climate silence to how power is controlled and exercised in society—“[h]ow control in modern societies is maintained through consent to ruling ideas rather than direct imposition of force.” She describes this as the “third dimension of power,” a concept devised by the sociologist Steven Lukes. That power is especially difficult to challenge because it is difficult to see. (Lukes, 2005; Norgaard, 2011)(11)(133). We see this in the U.S. in the general acceptance of neoliberalism and the focus on markets and economic growth, making it almost unthinkable for many to challenge those concepts. And we see this also in the fact that challenging American consumption or growth, or linking them to climate change, is almost taboo.

Several sociologists have criticized climate-communication experts, and environmental groups’ reliance on such experts in crafting climate-change messaging. Elizabeth Shove questions efforts to change individuals’ behavior through messaging, because such an approach “obscures the extent to which governments sustain unsustainable economic institutions and ways of life, and the extent to which they have a hand in structuring options and possibilities” (Shove, 2010). Robert Brulle makes a similar point, arguing that

climate communication strategies ... lack any contextual basis within a larger theoretical structure of the role of communication in facilitating large-scale social change processes. This theoretical deficit leads to the development of climate messaging strategies that support short-term pragmatic actions *that fit within economic and political imperatives*, but fail to address meaningfully the ecological imperatives defined by global warming. *And this also reinforces existing relationships of power and institutional dynamics.*

(Brulle, 2010)(emphasis added).

Environmental groups and climate-communication experts would do well to work more with sociologists, including those who have been critical of climate communication strategies. Sociologists have suggested this as well. Brulle and Dunlap have called for “[p]ublic sociology—an effort to engage the public beyond the academy. This can illustrate how the causes of climate change are interwoven into our current social, political, and economic order” (Brulle & Dunlap, 2015)(17). They further argue that “[t]he dominant climate change frame used in official reports depoliticizes the discussion of climate change and marginalizes analyses of the socioeconomic processes that generate and perpetuate it. ... One of the most pressing contributions [sociology] can make is to legitimate big questions, especially the ability of the current global economic system to take the steps needed to avoid catastrophic climate change” (Dunlap & Brulle, 2015)(413, 430).

In the final pages of *Self Efficacy*, Bandura describes the need for “social initiatives” to effect “significant social change,” and notes that “[s]ocial reforms are typically the product of an efficacious and highly committed minority.” He says “[t]he more people believe that unified effort is necessary and that they have a moral obligation to do their part, the more they will engage in political action” (Bandura, 1997)(487-89, 525). This—building a movement of committed efficacious people to effect major change—is very similar to what sociologists such as Brulle, Dunlap, Norgaard, and others say is required to address climate change, and certainly most climate communication experts would agree. The question, of course, is how best to do that, and sociologists have valuable ideas about that.

Norgaard argues that we need to develop our “sociological imagination” about climate change, and that talking more about climate change can potentially be an important step in that process (Norgaard, 2011)(121). The concept of sociological imagination comes from C. Wright Mills’s influential book of the same name. Norgaard describes it as “that ‘quality of mind necessary to grasp the constant interplay between our private lives and the political world’” (Norgaard, 2011)(43) quoting (Mills, 2000)(4). Mills further describes sociological imagination as “the capacity to shift from one perspective to another” (Mills, 2000)(7). Norgaard notes “the importance of conversation for a sociological imagination and the formation of political power” (Norgaard, 2011)(121). Stated another way, silence, including partial (implicatory) silence, is not conducive to building a sociological imagination, or a strong climate movement.

Norgaard also cites a need for those in the “privileged” developed Western nations to enhance our “moral imagination.” With climate change “[t]here will be more and more opportunities for privileged people to develop a moral imagination and imagine the reality of what is happening ...” to less privileged people living in poverty around the world (Norgaard, 2011)(222). That sounds very much like Bandura’s call to find ways to pierce our moral disengagement surrounding climate change, and echoes his call to exercise “the extraordinary power of humanization to curb inhumane practices” (Bandura, 2016)(446).

Other sociologists have also found “imagination” to be a key to understanding the causes of our climate predicament, as well as to finding ways forward. Ulrich Beck argues that the climate crisis requires that we find “new ways

of seeing the world, being in the world, and imagining and doing politics” (Beck, 2016)(181). Craig Calhoun and Georgi Derluguian say that climate change is a “cris[i]s of the imagination” (Calhoun & Derluguian, 2011).

Similarly, the writer Amitav Ghosh decries “the broader imaginative and cultural failure that lies at the heart of the climate crisis.” He says that “to imagine other forms of human existence is exactly the challenge that is posed by the climate crisis; for if there is one thing that global warming has made perfectly clear it is that to think about the world only as it is amounts to a formula for collective suicide. We need, rather, to envision what it might be” (Ghosh, 2016)(8, 128-29). This sort of imagining, and expanding our sociological and moral imaginations, can be greatly aided by ending our climate silence, and by challenging moral disengagement and addressing the important *worldwide* moral issues surrounding climate change.

Scholars have noted that simply delivering moral messages on climate change does not necessarily induce action to address the problem, much less create dedicated climate activists. That is at least in part because “understanding climate change as a moral imperative does not occur automatically, at an intuitive level. Instead it requires cold, cognitively demanding and ultimately relatively less motivating, moral reasoning” (Markowitz & Shariff, 2012)(244). In fact, moral messages can even backfire, causing people not inclined towards climate action to reinforce their negative views (Markowitz & Shariff, 2012; Täuber, Zomeran, & Kutlaca, 2014). Markowitz and Sharif, citing the philosopher Dale Jamieson, explain that one reason why people find it hard to discern a moral issue is that climate

change “lacks the features of an intentional moral transgression” (Jamieson, 2009; Markowitz & Shariff, 2012)(244).

But that is no longer entirely true. Evidence in recent years has shown the key role of corporate and conservative-think-tank funding of climate-science denial, (Dunlap & McCright, 2015). Efforts by environmental and other progressive groups to call out and shame such morally disengaged support for climate denialism have met with some success in recent years. One example is an effort to shame corporations belonging to ALEC, the organization that promotes climate-science disinformation to state legislators. The shaming effort has led to more than 100 major U.S. corporations pulling out of ALEC, some of them specifically citing its promotion of climate-science denial (Light, 2016).

There is promise in such a public shaming approach, which would be even more effective if business executives of good faith would join in the effort. Michael Mann, the UCLA sociologist, hopes for an eventual “split among capitalists, with low emitters turning against high ones” (M. Mann, 2013)(383). But so far corporations that have expressed serious concern about climate change have limited their action to steps like procuring clean energy, or pulling themselves out of ALEC, but usually very quietly and without calling for other corporations to join the exodus. Major corporations have generally opted not to lobby publicly or forcefully for legislative action on climate change, even when their business is suffering from climate-change effects. As U.S. Senator Sheldon Whitehouse puts it, “Washington's dirty secret is that even the American companies that are really good on sustainability put net zero effort into lobbying Congress on climate change” (Whitehouse, 2016). Nor do

corporations or their leaders generally call out publicly the bad acts of those corporations, usually high-emitting ones, that support climate denial and oppose efforts to reduce greenhouse-gas emissions. This sort of quietness on the part of powerful, influential business leaders is a particularly insidious form of climate silence. The failure of American business leaders to publicly support strong action on climate change, and their failure to publicly condemn corporate-funded climate-science denial, is a hugely damaging instance of moral disengagement. It brings to mind Martin Luther King Jr.'s comment about those white people during the civil rights era who privately disavowed racism, but failed to publicly condemn or work to stop the racists among them: "We will have to repent in this generation not merely for the hateful words and actions of bad people but for the appalling silence of the good people" (King, 1994).

In the wake of President Trump's announcement of efforts to roll back President Obama's climate actions, including the EPA's Clean Power Plan, a few corporate executives did criticize the president's move, albeit in generally mild tones (Lartey, 2017; Tabuchi & Cardwell, 2017). Far stronger denunciations of climate obstructionism, from far more executives, will be required to create the split among capitalists that the sociologist Mann calls for to break our current impasse.

The philosopher Dale Jamieson explains that what is needed to get more people to see climate change as a moral issue is a process called "moralization," a process whereby a societal practice previously thought to be good, or at least harmless, comes to be viewed as wrong and immoral (Jamieson, 2014). Such a process occurred with respect to cigarette smoking over the past 50 years (Rozin,

1999). A moralization process about burning fossil fuels is underway in America and around the world, but it is proceeding much too slowly, and has at times slowed or almost stopped, when it continually needs to accelerate.

In a fascinating account of moralization at work in the area around Yellowstone National Park, the sociologist Justin Farrell noted that morality and religion are at the heart of environmental conflicts. He broadens his definition of religion to encompass not just organized religion but also deep-seated moral and cultural beliefs: “the thick webs of meaning that structure our lives and propel our behavior” (Farrell, 2015). Farrell investigated several intractable environmental disputes between what he calls “Old West” inhabitants of the Yellowstone region (such as ranchers and farmers) and “New West” inhabitants (such as retirees, second-home owners, and people who can work remotely from anywhere with an Internet connection). He found that the arrival of New West people over the past 40 years, and their concern over environmental issues, led to “moral devaluation” of the Old West way of life. Arrival of New Westerners began a “struggle to enact and sustain moral order, as competing groups erect[ed] new moral boundaries in the fight to transform their opponents' sacred stories and core intrinsic values from right to wrong, good to evil, and virtuous to virtueless” (Farrell, 2015)(68). This, in turn made the conflict between the old and new ways particularly intractable, because “it is one thing to hear that your old way of life is outdated or economically obsolete, but it is another to hear that it is morally wrong and spiritually bankrupt” (Farrell, 2015)(69).

The process Farrell describes at Yellowstone is a microcosm of the much larger and more complex moralization process that is just starting across the world involving climate change. But with climate change, many people around the world are both Old West and New West at the same time. Our old way of life, so dependent on fossil fuels, is changing, although not nearly fast enough. We see both promise, but mostly challenge, in what will be replacing it. All of us, and especially all of us in high-consumption, high-emission societies, are seeing our old (or, to be more precise, current) way of life morally devalued. It is in this sense that Beck, Ghosh, Norgaard, and others argue that we need new ways of imagining ourselves and our place in the world. That is indeed a challenge—perhaps a challenge we might be able to meet. But not if we aren't discussing it.

Conclusion

In closing I return to Albert Bandura's point, on the final page of *Moral Disengagement*, that we should remember "the extraordinary power of humanization to curb inhumane practices" (Bandura, 2016)(446). To do that with respect to climate change requires both a sense of what Bandura calls "common humanity" as to all the world's people, and also an understanding that failing to address climate change with urgency is an inhumane practice. Addressing climate change is a huge task. It will require, among many other things, tremendous self-efficacy, collective efficacy, moral *engagement*, and an end to our climate silence.

References

- Adler, B. (2016, March 16). Why aren't Clinton and Sanders talking about international climate justice? Retrieved from <http://grist.org/climate-energy/why-arent-clinton-and-sanders-talking-about-international-climate-justice/>
- Agarwal, A., & Narain, S. (1991). A case of environmental colonialism. *Earth Island Journal*, 6(2), 39.
- Allen, M. (2016, August 20). Climate change is why we need resiliency. *Norfolk Virginian-Pilot*. Retrieved from http://pilotonline.com/opinion/columnist/guest/michael-allen-climate-change-is-the-reason-we-need-for/article_8f65ef45-3b51-5054-a9a2-486dae110fb4.html?sp-tk=22AA0EDB432374923F0D872223D5256629E06FA4A3FE18ACDCCB18EAF956F0967EECCE45E8441178B75CBF7488FF794C7401A3B0C60D473341DD1C06D0381D432D2D17975092077E2DB76A12B895CB0C704D3D9A67F29BA4CB442E59C3916A04ED749CAA8411C4C4166929AAA616AB7380DC7BB8186540C8623D504C0B4D7C76E9637B0834BB5B109CB25D764874418AAC0F4A9C
- Annett, A. (2016, November 14). Who Or What Is To Blame For Trump? Retrieved from <https://www.commonwealmagazine.org/blog/who-or-what-blame-trump>
- Associated Press. (2012, June 28). Climate change fears overblown, says ExxonMobil boss. *The Guardian*. Retrieved from

- <https://www.theguardian.com/environment/2012/jun/28/exxonmobil-climate-change-rex-tillerson>
- Bandura, A. (1986). *Social foundations of thought and action: a social cognitive theory*. Englewood Cliffs, N.J: Prentice-Hall. Retrieved from https://catalyst.library.jhu.edu/catalog/bib_896918
- Bandura, A. (1997). *Self Efficacy: The Exercise of Control* (1 edition). New York: W.H. Freeman & Company.
- Bandura, A. (2007). Impeding ecological sustainability through selective moral disengagement. *International Journal of Innovation and Sustainable Development*, 2(1), 8–35. <https://doi.org/10.1504/IJISD.2007.016056>
- Bandura, A. (2016). *Moral Disengagement: How Good People Can Do Harm and Feel Good About Themselves*. New York: Worth Publishers.
- Bandura, A. (2017, February 24). Author Interview of Albert Bandura.
- Beck, U. (2016). *The Metamorphosis of the World: How Climate Change is Transforming Our Concept of the World* (1 edition). Cambridge : Malden, MA: Polity.
- Beisner, C. (2015, August 6). “There Is No Moral Virtue in Being Wrong” — Interview with Dr. Calvin Beisner of the Cornwall Alliance on the Encyclical Laudato Si. Retrieved from <http://www.tfp.org/there-is-no-moral-virtue-in-being-wrong-interview-with-dr-calvin-beisner-of-the-cornwall-alliance-on-the-encyclical-laudato-si/>

- Brulle, R. J. (2010). From Environmental Campaigns to Advancing the Public Dialog: Environmental Communication for Civic Engagement. *Environmental Communication*, 4(1), 82–98. <https://doi.org/10.1080/17524030903522397>
- Brulle, R. J. (2014). Institutionalizing delay: foundation funding and the creation of U.S. climate change counter-movement organizations. *Climatic Change*, 122(4), 681–694. <https://doi.org/10.1007/s10584-013-1018-7>
- Brulle, R. J., & Antonio, R. J. (2015). The Pope’s fateful vision of hope for society and the planet. *Nature Climate Change*, 5(10), 900–901. <https://doi.org/10.1038/nclimate2796>
- Brulle, R. J., & Dunlap, R. E. (2015). Sociology and Global Climate Change: Introduction. In R. E. Dunlap & R. J. Brulle (Eds.), *Climate change and society: sociological perspectives* (pp. 1–31). Oxford: Oxford University Press.
- Calhoun, C., & Derluguian, G. (2011). Introduction. In C. Calhoun & G. Derluguian (Eds.), *The Deepening Crisis: Governance Challenges after Neoliberalism* (pp. 7–18). New York: NYU Press.
- Caney, S. (2010). Climate Change, Human Rights, and Moral Thresholds. In S. M. Gardiner, S. Caney, D. Jamieson, & H. Shue (Eds.), *Climate Ethics: Essential Readings* (1 edition, pp. 163–177). Oxford ; New York: Oxford University Press.
- Catholic Climate Covenant. (2015, December 8). You’re invited: Stories from Climate Change Witnesses.
- Clay, R. (2016, March). Albert Bandura receives National Medal of Science. Retrieved from <http://www.apa.org/monitor/2016/03/upfront-bandura.aspx>

Cohen, S. (2001). *States of Denial: Knowing about Atrocities and Suffering* (1 edition). Cambridge, UK : Malden, MA: Polity.

Conover, A. (n.d.). *Dale Jamieson Tells Us Why “Going Green” Won’t Stop Global Warming (And Why He Still Has Hope For Our Planet)*. Retrieved from <https://itunes.apple.com/us/podcast/episode-17-dale-jamieson-tells/id1117213342?i=1000379619330&mt=2>

Dauvergne, P. (2016). *Environmentalism of the Rich* (1 edition). Cambridge, MA: The MIT Press.

Davenport, C. (2017a, March 8). New Administrator Stacks E.P.A. With Climate Change Skeptics. *The New York Times*, p. 17. New York.

Davenport, C. (2017b, March 10). Chief of E.P.A. Bucks Studies About Climate. *The New York Times*, p. 1.

Davenport, C. (2017c, March 27). Climate Change Denialists in Charge. *The New York Times*. Retrieved from <https://www.nytimes.com/2017/03/27/us/politics/climate-change-denialists-in-charge.html>

Dunlap, R. E., & Brulle, R. J. (2015). Bringing Sociology Into Climate Change Research and Climate Change Into Sociology. In R. E. Dunlap & R. J. Brulle (Eds.), *Climate change and society: sociological perspectives* (pp. 412–436). Oxford: Oxford University Press.

Dunlap, R. E., & Jacques, P. J. (2013). Climate Change Denial Books and Conservative Think Tanks Exploring the Connection. *American Behavioral Scientist*, 57(6), 699–731. <https://doi.org/10.1177/0002764213477096>

- Dunlap, R. E., & McCright, A. M. (2015). Challenging Climate Change: The Denial Countermovement. In R. E. Dunlap & R. J. Brulle (Eds.), *Climate Change and Society: Sociological Perspectives* (pp. 300–332). New York, NY: Oxford University Press.
- Ebell, M. (2006, December 8). Love Global Warming. Retrieved from <https://www.forbes.com/forbes/2006/1225/038.html>
- Environmental Justice. (n.d.). Retrieved April 2, 2017, from <http://www.sierraclub.org/environmental-justice>
- Farrell, J. (2015). *The Battle for Yellowstone: Morality and the Sacred Roots of Environmental Conflict*. Princeton: Princeton University Press.
- Farrell, J. (2016a). Corporate funding and ideological polarization about climate change. *Proceedings of the National Academy of Sciences*, 113(1), 92–97. <https://doi.org/10.1073/pnas.1509433112>
- Farrell, J. (2016b). Network structure and influence of the climate change counter-movement. *Nature Climate Change*, 6(4), 370–374. <https://doi.org/10.1038/nclimate2875>
- Foner, E. (2017, January 2). Teaching the History of Radicalism in the Age of Obama (and Bernie). *The Nation*, 76–80.
- Foster, C. (2006, September). Confidence Man. *Stanford Magazine*. Retrieved from https://alumni.stanford.edu/get/page/magazine/article/?article_id=33332
- Geiger, N., & Swim, J. (2016). Climate of silence: Pluralistic ignorance as a barrier to climate change discussion. *Journal of Environmental Psychology*, 47, 79–90. <https://doi.org/10.1016/j.jenvp.2016.05.002>

- Ghosh, A. (2016). *The Great Derangement: Climate Change and the Unthinkable*. Chicago ; London: University Of Chicago Press.
- Hamilton, C. (2010). *Requiem for a Species: Why We Resist the Truth About Climate Change*. London: Earthscan.
- Hamilton, C. (2013). *Earthmasters: The Dawn of the Age of Climate Engineering*. New Haven, CT, USA: Yale University Press.
- Heald, S. (2014, May 7). Dominion won't explain ties to anti-clean energy "bill mill" ALEC. Retrieved from <https://powerforthepeopleva.com/2014/05/07/dominion-wont-explain-ties-to-anti-clean-energy-bill-mill-alec/>
- Heald, S. (2016a). The Pope's Climate Message in the United States: Moral Arguments and Moral Disengagement. *Environment: Science and Policy for Sustainable Development*, 58(3), 4–13.
<https://doi.org/10.1080/00139157.2016.1161995>
- Heald, S. (2016b, January 3). Dominion can't support clean energy and ALEC. *Virginian-Pilot*. Norfolk, Va. Retrieved from http://pilotonline.com/opinion/columnist/guest/guest-column-dominion-can-t-support-clean-energy-and-alec/article_77de5af0-8e45-5c81-a662-89f07a8ba10a.html
- Heald, S. (2016c, May 19). Inside the minds of Dominion's leaders, vacant space where climate thinking should be. Retrieved from <https://powerforthepeopleva.com/2016/05/19/inside-the-minds-of-dominions-leaders-vacant-space-where-climate-thinking-should-be/>

- Heald, S. (2017, January 24). How can we address climate change if we don't talk about it? Retrieved from <https://powerforthepeopleva.com/2017/01/24/how-can-we-address-climate-change-if-we-dont-talk-about-it/>
- Jamieson, D. (2007). The Moral and Political Challenges of Climate Change. In S. C. Moser & L. Dilling (Eds.), *Creating a Climate for Change: Communicating Climate Change and Facilitating Social Change* (Reissue edition, pp. 475–482). Cambridge University Press.
- Jamieson, D. (2009). Climate Change, Responsibility, and Justice. *Science and Engineering Ethics*, 16(3), 431–445. <https://doi.org/10.1007/s11948-009-9174-x>
- Jamieson, D. (2014). *Reason in a Dark Time: Why the Struggle Against Climate Change Failed -- and What it Means for our Future*. New York: Oxford University Press.
- King, J. M. L. (1994). *Letter from the Birmingham Jail* (1st edition). San Francisco: Harpercollins.
- Klein, N. (2011, November 9). Capitalism vs. the Climate. *The Nation*. Retrieved from <https://www.thenation.com/article/capitalism-vs-climate/>
- Klein, N. (2014). *This Changes Everything: Capitalism vs. The Climate*. New York: Simon & Schuster.
- Klein, N. (2016, June 2). Let Them Drown: The Violence of Othering in a Warming World. *London Review of Books*, pp. 11–14.

- Lartey, J. (2017, March 29). "Climate change is real": companies challenge Trump's reversal of policy. *The Guardian*. Retrieved from <https://www.theguardian.com/environment/2017/mar/29/climate-change-companies-challenge-trump-mars-staples-gap>
- Leiserowitz, A., Maibach, E. W., Roser-Renouf, C., Rosenthal, S., & Cutler, M. (2017). *Climate Change in the American Mind: November 2016*. New Haven, CT: Yale University and George Mason University. Retrieved from <http://climatecommunication.yale.edu/wp-content/uploads/2017/01/Climate-Change-American-Mind-November-2016.pdf>
- Light, J. (2016, February 17). Ford Becomes the Latest Big Company to Dump ALEC. Retrieved from <http://billmoyers.com/story/ford-becomes-the-latest-big-company-to-dump-alec/>
- Lomborg, B. 1965-. (2007). *Cool it: the skeptical environmentalist's guide to global warming* (1st ed). New York: Alfred A. Knopf. Retrieved from https://catalyst.library.jhu.edu/catalog/bib_2694273
- Lovell, D. (2015, December 22). Two Stanford scientists to receive the National Medal of Science. Retrieved from <http://news.stanford.edu/2015/12/22/national-medal-science-122215/>
- Lukes, S. (2005). *Power: A Radical View* (2nd edition). Houndmills, Basingstoke, Hampshire : New York: Palgrave.
- Maibach, E., Leiserowitz, A., Rosenthal, A., Roser-Renouf, C., & Cutler, M. (2016). *Is There a Climate "Spiral of Silence" in America: March 2016*. New Haven, CT:

- Yale University and George Mason University. Retrieved from <http://climatecommunication.yale.edu/wp-content/uploads/2016/09/Climate-Spiral-Silence-March-2016.pdf>
- Maibach, E., Leiserowitz, A., Roser-Renouf, C., Myers, T. A., Rosenthal, S., & Feinberg, G. (2015). *The Francis Effect: How Pope Francis Changed the Conversation About Global Warming*. Fairfax, VA: George Mason University and Yale University. Retrieved from http://environment.yale.edu/climate-communication/files/The_Francis_Effect.pdf
- Mann, M. (2013). *The Sources of Social Power: Volume 4, Globalizations, 1945-2011*. New York: Cambridge University Press.
- Mann, M. E., & Toles, T. (2016). *The Madhouse Effect: How Climate Change Denial Is Threatening Our Planet, Destroying Our Politics, and Driving Us Crazy*. New York: Columbia University Press.
- Markowitz, E. M., & Shariff, A. F. (2012). Climate change and moral judgement. *Nature Climate Change*, 2(4), 243–247. <https://doi.org/10.1038/nclimate1378>
- McCright, A. M., & Dunlap, R. E. (2010). Anti-reflexivity: The American Conservative Movement's Success in Undermining Climate Science and Policy. *Theory, Culture & Society*, 27(2–3), 100–133. <https://doi.org/10.1177/0263276409356001>
- McKibben, B. (2016, November 30). How the Active Many Can Overcome the Ruthless Few. *The Nation*. Retrieved from

- <https://www.thenation.com/article/how-the-active-many-can-overcome-the-ruthless-few/>
- Mills, C. W. (2000). *The Sociological Imagination* (40th anniversary edition). Oxford England New York: Oxford University Press.
- Milnes, T., & Haney, T. J. (2017). "There's always winners and losers': traditional masculinity, resource dependence and post-disaster environmental complacency. *Environmental Sociology*, 0(0), 1–14.
<https://doi.org/10.1080/23251042.2017.1295837>
- Mooney, C. (2016, December 14). Rex Tillerson's view of climate change: It's just an "engineering problem." *Washington Post*. Retrieved from
<https://www.washingtonpost.com/news/energy-environment/wp/2016/12/13/rex-tillersons-view-of-climate-change-its-just-an-engineering-problem/>
- Myers, T. A., Roser-Renouf, C., Maibach, E., & Leiserowitz, A. (2017). Exposure to the Pope's Climate Change Message Activated Convinced Americans to Take Certain Activism Actions. *Global Challenges*, *In Press*.
- Narain, S., & Bhushan, C. (2015). *Capitan America--US climate goals: a reckoning*. New Delhi: Centre for Science and Environment. Retrieved from
<http://www.cseindia.org/userfiles/Capitan-America-Report.pdf>
- Norgaard, K. M. (2011). *Living in Denial: Climate Change, Emotions, and Everyday Life* (1 edition). Cambridge, Mass: The MIT Press.

- Oreskes, N., & Conway, E. M. (2011). *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming* (Reprint edition). New York: Bloomsbury Press.
- Orr, D. W. (2012). *Down to the Wire: Confronting Climate Collapse* (Reprint edition). Oxford University Press.
- Orr, D. W. (2016). *Dangerous Years: Climate Change, the Long Emergency, and the Way Forward*. New Haven, CT: Yale University Press.
- Plait, P. (2014, June 12). With Friends Like These *Slate*. Retrieved from http://www.slate.com/blogs/bad_astronomy/2014/06/12/global_warming_denial_calgary_billboard_is_laughably_wrong.html
- Readfearn, G. (2014, June 24). The Millions Behind Bjorn Lomborg's Copenhagen Consensus Center US Think Tank. Retrieved from <https://www.desmogblog.com/2014/06/25/millions-behind-bjorn-lomborg-copenhagen-consensus-center>
- Readfearn, G. (2015, February 9). Exclusive: Bjorn Lomborg Think Tank Funder Revealed As Billionaire Republican "Vulture Capitalist" Paul Singer. Retrieved from <https://www.desmogblog.com/2015/02/05/exclusive-bjorn-lomborg-think-tank-funder-revealed-billionaire-republican-vulture-capitalist-paul-singer>
- Resources - Environmental Justice. (n.d.). Retrieved April 2, 2017, from <http://www.catholicclimatecovenant.org/resources/environmental-justice>
- Romm, J. (2009, May 13). Mark Mellman must read on climate messaging: "A strong public consensus has emerged on the reality and severity of global warming,

- as well as on the need for federal action” — ecoAmerica “could hardly be more wrong.” Retrieved October 5, 2016, from <https://thinkprogress.org/mark-mellman-must-read-on-climate-messaging-a-strong-public-consensus-has-emerged-on-the-reality-and-3efc9939c94e>
- Romm, J. (2010a, June 17). Can you solve global warming without talking about global warming? Retrieved from <https://thinkprogress.org/can-you-solve-global-warming-without-talking-about-global-warming-5afbfe7772b6>
- Romm, J. (2010b, June 19). The oily operators behind the religious climate change disinformation front group, Cornwall Alliance. Retrieved from <https://thinkprogress.org/the-oily-operators-behind-the-religious-climate-change-disinformation-front-group-cornwall-alliance-536175fe5e04>
- Romm, J. (2011, April 3). Downplaying or remaining silent about climate change was and is a blunder for progressives. Retrieved from <https://thinkprogress.org/downplaying-or-remaining-silent-about-climate-change-was-and-is-a-blunder-for-progressives-b89253c1b9e7>
- Romm, J. (2016, October 3). End climate silence: The most important thing you can do to fight global warming. Retrieved from <https://thinkprogress.org/end-climate-silence-cbe439a31a8e#.b1lsezhkyk>
- Rozin, P. (1999). The Process of Moralization. *Psychological Science*, 10(3), 218–221. <https://doi.org/10.1111/1467-9280.00139>
- Said, E. W. (1979). *Orientalism* (1st Vintage Books ed edition). New York: Vintage.

- Shove, E. (2010). Beyond the ABC: Climate Change Policy and Theories of Social Change. *Environment and Planning A*, 42(6), 1273–1285.
<https://doi.org/10.1068/a42282>
- Speth, J. G. (2009). *The Bridge at the Edge of the World: Capitalism, the Environment, and Crossing from Crisis to Sustainability* (First THUS Edition edition). New Haven, CT: Yale University Press.
- Speth, J. G. (2012). *America the Possible: Manifesto for a New Economy*. New Haven, CT: Yale University Press.
- Sullivan, A. (2016, November 27). The AIDS Fight: Andrew Sullivan on a History of the Movement. *The New York Times*, p. 1.
- Tabuchi, H., & Cardwell, D. (2017, March 31). Trump's Climate Foes Hope Executives Can Sway Him. *The New York Times*, p. 12.
- Täuber, S., Zomer, M. van, & Kutlaca, M. (2014). Should the moral core of climate issues be emphasized or downplayed in public discourse? Three ways to successfully manage the double-edged sword of moral communication. *Climatic Change*, 130(3), 453–464. <https://doi.org/10.1007/s10584-014-1200-6>
- Thaker, J., Maibach, E., Leiserowitz, A., Zhao, X., & Howe, P. (2016). The Role of Collective Efficacy in Climate Change Adaptation in India. *Weather, Climate, and Society*, 8(1), 21–34. <https://doi.org/10.1175/WCAS-D-14-00037.1>
- The Environmental Justice Movement. (n.d.). Retrieved April 2, 2017, from <https://www.nrdc.org/stories/environmental-justice-movement>

- Whitehouse, S. (2016, June 7). Why Isn't Anyone Lobbying For Climate Change?
Retrieved from <http://www.forbes.com/sites/realspin/2016/06/07/lobby-climate-change-failure/>
- Wong, E. (2016, November 19). Trump Has Called Climate Change a Chinese Hoax.
Beijing Says It Is Anything But. *The New York Times*, p. 16.
- York, E. H. N. (2016, October 1). After Revenant ... Leonardo DiCaprio stars as eco-warrior in climate battle. *The Guardian*. Retrieved from
<https://www.theguardian.com/film/2016/oct/01/leonardo-dicaprio-climate-change-film-before-the-flood-barack-obama>
- Zerubavel, E. (2007). *The Elephant in the Room: Silence and Denial in Everyday Life*.
Oxford; New York: Oxford University Press.
- Zimmerman, B. J., & Schunk, D. H. (2003). Albert Bandura: the scholar and his contributions to educational psychology. In B. J. Zimmerman & D. H. Schunk (Eds.), *Educational psychology: a century of contributions*. Mahwah, N.J: L. Erlbaum Associates. Retrieved from
https://catalyst.library.jhu.edu/catalog/bib_2433989

Curriculum Vitae

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